DOCUMENT RESUME

ED 105 156 95 CE 003 425

AUTHOR	Kester, Ralph J.; Howard, John, Jr.
TITLE	Factors Critical to the Adoption of Career Guidance Systems.
INSTITUTION	Ohio State Univ., Columbus. Center for Vocational and Technical Education.
SPONS AGENCY	National Inst. of Education (DHEW), Washington, D.C.
PUB DATE	11 Dec 74
NOTE	29p.; Paper presented at Annual Meeting of the American Vocational Educational Research Association (New Orleans, Louisiana, December 1974)
EDRS PRICE	MF-$0.76 HC-$1.95 PLUS POSTAGE
DESCRIPTORS	*Adoption (Ideas); *Career Education; Changing Attitudes; *Counseling Instructional Programs; *Educational Change; Educational Innovation; Educational Research; Occupational Guidance; *Performance Factors; Program Attitudes; Research Methodology; Secondary Education

ABSTRACT

The study endeavors to describe, assess, and trace the progress of six high schools as the faculty and staff responded to the adoption of an innovative career guidance system. The study provides a model, a method, and some generalizations about factors influencing the process. The document is organized according to: (1) definitions of basic structural elements, (2) phases of adoption putting the process into the dimension of time, (3) factors which may affect the process as the basic elements interact during the stages of adoption, (4) a description of data collection procedures, including interviews, field observation, and surveys, (5) data analysis procedures, (6) concluding hypotheses, and (7) a checklist of factors influencing all adoption stages, initiation, implementation, and potential for continued use. The factors are grouped according to characteristics of the innovation, interaction between advocates and consumers, and circumstantial and situational influences. The authors emphasize the fact that no attempt is made to present specific findings. (MW)

ED105156

JAN 27, 1975

Factors Critical to the Adoption of Career Guidance Systems

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION
THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

Ralph J. Kester

John Howard, Jr.

BEST COPY AVAILABLE

A paper presented at the annual meeting of the American Vocational Educational Research Association, an affiliate of the American Educational Research Association and American Vocational Association, held in New Orleans, Louisiana, on December 7-11, 1974

The information in this paper was collected pursuant to a contract with the National Institute of Education, U. S. Department of Health, Education and Welfare. Points of view or opinions do not necessarily represent official position or policy of either The Center for Vocational Education or the National Institute of Education.

CE003425

CONTENTS

	Page No.
Preface	i
Background	1
Research Purpose	2
Research Design and Methodology	3
Introduction	3
Limitations and Qualifications	3
Construction of the Conceptual Framework	5
Basic Elements of the Conceptual Framework	6
Stages of Adoption	7
Potentially Influential Factors	9
Data Collection Procedures	12
Data Analysis Procedures	14
Statement Concerning Results	16
Description of the System	16
Description of the Sites	17
Generalized Critical Factors	18
Introduction	18
Factors Influencing All Adoption Stages	19
Factors Influencing Initiation	20
Factors Influencing Implementation	21
Factors Influencing Potential for Continued Use	23
References	25

Preface

This paper is based on information which resulted from a study conducted at The Center for Vocational Education under the sponsorship of the National Institute of Education. An attempt has been made to provide enough information concerning the nature of the research effort so as to put the statement of factors critical to the adoption of career guidance systems into perspective.

It is important to point out that the factors presented in the latter part of this paper should be viewed as hypotheses and not conclusive statements based on relational or causal type research.

Other factors which had a major influence on the study were the somewhat unique nature of the innovation in question and the fact that it was still under development while being adopted by the sites in this investigation. These points are brought out in more detail in the content of this paper.

The intent of the paper is to present a conceptual framework and methodology which should be useful to practitioners, researchers and others in their attempts to understand the process of adoption. In addition, the paper presents some general factors which resulted from an application of this framework and methodology in an actual adoption setting.

FACTORS CRITICAL TO THE ADOPTION OF CAREER GUIDANCE SYSTEMS

RALPH J. KESTER AND JOHN HOWARD, JR. *

Background

Approximately four years ago, The Center for Vocational Education (CVE) launched a development effort to assist high school staffs in their efforts to provide effective career guidance services for all students. An awareness of the need for this development effort resulted from research which indicated that high schools were generally offering more guidance services than they could fully support. (Campbell, et. al., 1968). Secondly, Campbell's survey revealed that a very small portion of time was allotted to what can be called career guidance, that is guidance concerning decisions about the students' academic or vocational pursuits during and after high school.

The development project which was initiated was a systems approach to providing career guidance services for high school students within the limits of obtainable resources. The systems aspect of the project was based on the assumption that students, teachers, administrators, and parents have a right and obligation to help direct the high schools in their attempts to provide relevant services. Therefore, a comprehensive needs assessment was a major element of the system. The system also assumed that it was the responsibility of the school personnel to assess their own state of resources and based on an assessment of needs arrive at goal priorities and objectives. Additionally, the attitude of the developers was that the objectives or outcomes should be

---

*Ralph J. Kester is a research and development specialist and John Howard, Jr. is a graduate research associate at The Center for Vocational Education located at The Ohio State University in Columbus, Ohio. The authors also wish to express their appreciation to Nancy Martinez who assisted us with editing and Kathy Pierce who had to transcribe our scribblings.

student oriented and accountable. Furthermore, the system was structured so that the faculty and staff of the school, along with the students and an advisory committee of the community, developed, implemented, and evaluated instructional guidance units designed to accomplish the specified goals and objectives.

Research Purpose

At the same time this career guidance system was being considered for development, other researchers at CVE, including the authors of this paper, were interested in studying the process of change.

The trial phase of the systems approach to career guidance was seen as a challenging opportunity to learn more about what influences the acceptance of innovations in school organizations. Because the guidance system required the coordination of a major portion of the people associated with a high school, it had the potential of providing an opportunity for observation of a multiplicity of factors influencing the adoption process. Such a study, the researchers felt, would result in a descriptive analysis record of what actually happened as the system was introduced and subsequently tried in the six school settings. The purpose of the analysis was, then, to determine what the process of the adoption of the innovation involved and what factors had an influence on that process. The six sites in which the guidance system was introduced were viewed as separate cases of the adoption of the same innovation.*

Due to the paucity of theory about adoption of innovations in organizations, it was necessary to view the study as an exploratory analysis. This meant that the results of the study would be viewed necessarily as theoretical constructions or hypotheses to be verified in later studies of the adoption of innovations in school organizations. This latter point is important because it emphasizes the fact that the research was not initiated to draw casual relationships; but

*A more detailed analysis of the study which supports the content of this paper can be found in Kester and Howard (forthcoming).

rather to suggest certain potential effects or relationships which may occur during the adoption of innovations in school organizations. In short, the study endeavored to describe and assess the process through which six high schools went as the faculty and staff responded to the career guidance system. The study provides a model, a method, and some generalizations which researchers/educators/practitioners can use in their attempts to better understand the process of adopting career guidance systems, or any other educational innovation.

Research Design and Methodology

Introduction

The basic design and methodology of the study followed a case study approach. Initially a conceptual framework was constructed out of existing knowledge concerning the adoption of the innovations. Data collection methods and procedures were then established to maximize the gathering of data in the six sites within the limitations of available resources. Finally, the quantitative and qualitative data were analyzed and synthesized, and the findings were generalized to provide a base for further study. Before presenting the actual design and methodology, a discussion of certain limitations and qualifications of the study will be presented.

Limitations and Qualifications

It is important to note that in any research effort there are certain limiting or qualifying factors which must be taken into account in order to gain a better perspective of the nature of the study. In this study one of the major limitations was the small amount of resources in terms of time, money, and personnel allocated to the task. An additional corresponding limitation was the complexity of the process of adoption which was being investigated. Because of the limitation of resources, the number of potentially influencial factors, and the durth of instrumentation in the field of adoption of innovations

in organizational settings, it became necessary to use rather modest instrumentation to collect appropriate data.

Added to these limitations listed above, there was also the fact that the adoption circumstances of the guidance system were somewhat unique in two respects. First of all the system that was being used as a career guidance system was not a total career guidance program with prescribed content. It was better depicted as a system or set of procedures through which a high school would establish its own career guidance program. Be that as it may, the innovation in question did provide a good example of a system type innovation (see the conceptual framework discussion for more detail of this point). What this means is that the career guidance system as described in this paper may be somewhat atypical within the set of all career guidance systems. For convenience, the innovation under investigation in this study will be referred to as a career guidance system.

The second unique aspect of the adoption setting was that the major purpose of the CVE developers (as distinguished from the CVE investigators of adoption) during the time of the study was to further develop and test particular aspects of the system. This meant that the system was in a somewhat continuous state of trial and revision. Therefore, it is logical that much of the comment about the system recorded during the study was due in part to its uncompleted nature.

One might wonder that with all of these limiting factors how can any research information be of value. The defense of the information reported in this study lies in the fact that faculty and staffs of the schools did tend to view the career guidance system as an invention which could assist them in their efforts to provide better career guidance to their students. This was how it was presented to them and this is how they accepted it. In this context the faculty and staffs' reactions and the things which occurred to facilitate or inhibit their accomplishment of the various tasks were part of an adoption process.

Within the limitations as stated, the research design, the data collected, the analysis performed, and the subsequent information of this study can provide insight to the practitioner, evaluator or research in their attempts to better understand the process of adopting innovation. In particular the information can be even more useful to those interested in the adoption of innovations which could be termed career guidance systems.

Construction of the Conceptual Framework*

In any effort to explain a particular event or set of events, the researcher has certain conceptual ideas concerning the substance of that event. Sometimes these conceptual ideas are called assumptions, sometimes hypotheses, at other times theory, and in the case of this study, a conceptual framework. The phrase "conceptual framework" was used in this study because very little substantial theory exists concerning exactly what goes on during the acceptance of new ideas (innovations) in educational organizations. However, some categories of influencing variables have emerged from research. These conceptual categories were designed, therefore, to guide but not restrict, in any severe sense, the inclusion of other possible variables which might be identified in the process of observing the guidance program.

The following comments focus on three major sections of the conceptual framework. First the basic structural elements are defined. Next an explanation of the stages or phases of adoption puts the process into the dimension of time. Finally the focus is on those factors which may affect the process as the basic elements interact during the stages of adoption.

---

*Much of the initial conceptualization for this aspect of the research was drawn from a previous research effort at The Center for Vocational Education (Hull, et. al., 1973).

Basic Elements of the Conceptual Framework. The framework suggests that the process of accepting new ideas or programs in educational organizations involves three basic antecedent and structural elements. One element is the idea or program which is not now being used by at least some individuals in the career guidance system developed by CVE. As mentioned previously, the innovation in this study was neither an idea or program, but a set of materials, guidelines and procedures designed to be used by the faculty, staff and others (community and students) to develop and implement their own career guidance program. The second antecedent element is an individual or group which is suggesting or supporting the use of the innovation. These are labeled advocates. The advocates in this study were numerous. Primarily they were certain administrators, some teachers and a person designated as the field representative of the project in the school. The third antecedent element in the framework is the individuals or groups who are intended to implement the innovation. These individuals are referred to as consumers. The consumers of the career guidance system were primarily the faculty and staff of each of the high schools.

Once the innovation, advocates and consumers are identified, the process of change can be explained further by referring to an interaction phase. This phase is characterized by the interaction which occurs between advocates and consumers as they communicate about the innovation. The advocates formulate and initiate strategies based on their perceptions of the innovation and of the consumer. The consumers respond or initiate counter strategies based on their perceptions of the innovation and the advocates. This is not to say that consumers are always in a reactive role. At times, the consumer may initiate contact with an interaction between an advocate and a consumer. For example, some teachers advocated the use of behavioral objectives in the guidance system, but objected to the involvement of students in the process.

This example reveals some of the complexity and thus difficulty for the researchers in their attempt to audit and account for important influences.

Change, under this framework, is defined as the perceived impact, or effects on the consumer, innovation, advocate or any relationship between the three. Theoretically, change can occur at any point in time after the three antecedent conditions begin to interact. The perceptions of impact or effect can be from the viewpoint of the advocate, the consumer, or some other observer.

To get a full picture of what is transpiring in a change attempt, one must take a position as to what the change might be, and yet observe unintended consequences which may occur. This implies that observations will be made over a period of time and that information will be consciously and systematically compiled.

Stages of Adoption. The assumption that change implies a continuance of time also suggests the possibility of stages of adoption. Rogers and Shoemaker (1971) and others have suggested and given support to the observation that individuals (consumers) go through various stages as they respond to innovations. Rogers labels these as: (1) awareness, (2) interest, (3) mental evaluation, (4) trial, and (5) adoption or incorporation. This construct of "stages of adoption" is an integral part of the conceptual framework used in this study. The construct is further defined by the proposal that these stages are independent. That is, the successful completion of one stage by a consumer does not imply continuance to the next.

Giacquinta (1973), expanded the concept of individual adoption to group or organization adoption. He suggested that organizations as collective sets of individuals go through three identifiable stages in the adoption process. These he labeled: (1) initiation, (2) implementation and (3) incorporation.

Initiation is the stage in which members of the organization become aware, interested, and mentally evaluate the innovation; this leads to a decision to try. In this study, the initiation stage was quite distinct. It was identified as the period of time from which a state or district became aware of the desire to use field sites to the point at which the faculty and staff decided to try the system.

From the point of a decision to try the innovation, the members of the organization are in implementation. All members may not arrive at the decision to try, but due to the dynamics of the organization, the decision is made. This point further illustrates the complexity of analyzing the influential factors of the adoption process. If successful, implementation results in the appropriate members of the organization behaving according to the expectations of the innovation. Implementation of the career guidance system was the period of time after the decision to try to the end of a two-year period in which CVE, the state, and the local district contracted to assist in the development and subsequently test aspects of the system. In the case of two out of six sites, the implementation period started about a year earlier, making the implementation period almost three years. The implementation of the system involved carrying out a number of tasks specified by the procedures.

The final and most substantial stage of adoption according to our conceptual framework is incorporation. Incorporation with respect to an innovation, occurs to the extent that various aspects of the innovation become routine elements of organizational behavior. Due to the short time frame of the study (three years for two schools and two years for four schools) it was difficult to determine whether or not the specified tasks of the career guidance system were becoming routine in the schools. Therefore, the concept of incorporation was modified and the changed concept labeled "potential for continued use."

Essentially potential for continued use was an estimate of the probability that the career guidance system would be incorporated. These stages of initiation, implementation and incorporation also are conceptualized as independent stages in the adoption process. The successful completion of one does not imply continuance to the next.

Potentially Influential Factors. During the transactions between advocate and consumer numerous factors have potential influence. Three distinct sets of influences are explained. One set is the situational or circumstantial. Included in this set are various political influences, financial decisions, and natural events which occur during or as a result of the intervention of an innovation or those associated with it. Some examples of these are state laws, amount of federal money available, the priorities which have been established, or events such as semester tests or bad weather. Also included in this set are those formal and informal organizational arrangements which are an integral part of existing operational procedure of any organization. These organizational arrangements involve such things as the extent to which decisions are made by one individual, how much supervision of personnel occurs, the extent to which standard procedures are used, and how extensive the communication is between various sections of the organization.

Besides the situational or circumstantial factors the actions and reactions of advocates and consumers have a potential influence on the acceptance process. Theoretically, these actions and reactions can be described in terms of three types: (1) informative, (2) persuasive, and (3) coercive. In practice, few actions or reactions by either advocates or consumers are likely to be one type. They are likely to be combinations of the three basic types in differing amounts. "Informative" tactics are those designed to present or request

information concerning facts about the innovation or change attempt. "Persuasive" tactics are those messages which use the manipulation of values of either the consumer or advocate to accomplish certain goals. "Coercive" tactics are those using the application of power to force the compliance of other individuals to certain goals. Specific examples and the effect of these tactics will be brought out in the analysis of findings. From the advocate's viewpoint these tactics are employed to maximize the chance for successful adoption. From the consumer's viewpoint these tactics are used to insure the acceptance of change which is meaningful and/or advantageous. In some cases this would mean resisting the acceptance of certain parts or all of a particular innovation.

The third set of influential elements of any change attempt is the characteristics of the innovation itself and the reactions of the advocates and consumers to those characteristics. Innovations consist of two subsets of characteristics: (1) types and (2) perceived attributes. The "types" of innovations, are three: an idea in the form of a written or verbal comment; an instructional package, or instructional tool which can be independently used by one practitioner (e.g. text books, reading or mathematics labs); or an instructional or management system or program which requires the interdependency of several individuals in order for it to function properly (e.g. program planning and budget system, team teaching, and individual instruction). The innovation observed in this study was of the latter type; this will be explained in more detail in the section describing the innovation.

The "perceived attributes" of the innovation can be observed and discussed in terms of six categories (Kester and Hull, 1973). Each category is similar to a dimension of the innovation as it is viewed by the consumers.

The first category is the degree to which the content and purpose of the change are seen as relevant to the needs of the consumers (e.g. teachers, and

administrators) and of the students they serve. The second category is the extent to which the innovation requires additional resources for the purpose of implementation. This refers to the people, time, and money, beyond that which is presently available or able to be reallocated. The degree to which the innovation contains values which are perceived as contrary to those values of the consumer population is the third category. The fourth category is the "consumer report rating." This refers to a number of aspects such as: Is the innovation perceived as tested? Do the consumers feel as though the developers guarantee success? Is the innovation seen as cost effective? A fifth category is "credibility." "Credibility" is assumed to be a function of the consumer's respect for the organization or individual who produced the change, and of the organization or individual proposing the change. The sixth and final category of "perceived attributes" concerns the extent to which the innovation requires organizational changes such as reallocation of time, personnel, and money.

Given the characteristics of the innovation and the fact that it is being advocated, the advocates' and consumers' reactions to it are most important. They will have reactions which will generally fall into one of three categories. They will have a certain degree of involvement with the innovation, attitudes toward it, and a certain level of expectation for it.

In summary the conceptual framework views the process of change in three basic phases. First there is an antecedent phase which necessitates the coming together of an advocate with an innovation designed for some set of consumers. Once these conditions are in existance the process of change enters an interactive phase in which advocates and consumers communicate about the content of the innovation. The third phase, the impact phase really overlaps the interactive phase and consists of the effects or consequences of the interactive phase.

During the interactive phase the framework suggests that individual consumers and organizations of consumers go through stages of adoption which are relatively independent. As the advocates and consumers are interacting and proceeding through the various stages of the adoption process the framework further suggests that a variety of influences are brought to bear on that relationship. Some of these influences are seen as part of the contextual or situational circumstances; others are viewed as being associated with other aspects of the innovation itself; still others are seen as a result of the actual interaction between the advocates and the consumers. Using this framework helped focus attention on a rather comprehensive set of potential influences on the adoption of the career guidance system.

Data Collection Procedures

Once the design and conceptual framework were established, procedures were set up to collect observational data about the adoption process from the six sites. Numerous data collection means and sources were used.

The instrumentation included: (1) a survey designed to assess the degree of involvement, attitudes toward and expectations for the guidance system of the faculty and staffs of the high schools; (2) a quantified profile of the "perceived attributes" of the guidance system as an innovation (refer to the conceptual framework for a definition of the six categories of "perceived attributes"); (3) a quantified profile of the perceived organizational characteristics of the schools such as degree of centralized decision making, extent of supervision, and level of standardization; (4) collection of selected facts concerning various demographics of each site community, school district, and school which were used in the description of the sites; (5) a set of charts depicting the basic formal staff line organization structure of each of the

sites from the state to the district to the local school (In addition, these charts also illustrated the amount of communication and the flow of information between segments of the formal structure.); (6) a record of incidents or events at the sites having a potential effect on the adoption of OG; (7) a chart illustrating the amount of activity with respect to the guidance system; and (8) a set of three indices cataloguing the degree of adoption in terms of the phases of initiation, implementation, and incorporation or in this case, the potential for continued use. This latter set of three indices provided what could be referred to as the dependent measures for the study.

The following list explains, in summary, the basic techniques and sources used to collect the data:

1. Interviews with selected field site personnel at the state district and local level (including students).

2. Field notes of participant observers whose role it was to monitor the progress of the trial of their assigned school—they documented weekly activities, events and other information required by the development and research staffs.

3. Documentation records of the development staff which included:

   a. a correspondence file
   b. trip reports on visits to the field sites
   c. memoranda records
   d. official quarterly reports to state level personnel
   e. audio tapes and annotated transcripts of audio tapes of meetings held at the sites.

4. Paper and pencil survey data at different points in time from three administrations of the attitudinal survey, developed to acquire the response of the faculty and staff to the guidance system.

5. Periodic phone conversations with the participant observers and informal conversations with them while they were at CVE or the CVE researchers were on a site visit.

6. Extensive conversations and semi-structured interviews with members of the development staff and other personnel in CVE, who were knowledgeable about the guidance system effort.

Using the instrumentation and the sources outlined, data was collected over a three-year period. This encompassed the time from the first school's involvement with the prototype development (in the 1971-1972 school year) to the end of the 1973-1974 school year. As was mentioned previously, two schools were studied for three years and the remaining four were studied for two years.

Data Analysis Procedures

The total data set was in various combinations of qualitative and quantitative forms. Therefore, both statistical and content types of analysis were required. The statistical analyses were primarily descriptive except for some correlational analysis of the data gathered through the use of the paper and pencil attitudinal survey.

Figure 1 provides a diagram of the schema used in analysis of the data in this case study. Both the statistical and content data were used to write brief histories of each of the six sites. These were written according to the three stages of organizational adoption, (i.e., initiation, implementation, and incorporation or potential for continued use). The discussions were further organized by the three areas of potential effect outlined in the conceptual framework (i.e., innovation characteristics, advocate and consumer interaction, and situational or circumstantial influences.

Each stage was then summarized across sites by stage and area of potential influence. These summarized discussions will be presented in the following sections as findings. These summaries (results) were in turn further condensed by formulating generalizations across and among sites, stages, and areas of potential influence. The last section of this paper presents a listing of these generalizations and suggests that they can be used for further study of the process of adoption.

STAGES OF ADOPTION	Potential Effects	By Site A	B	C	D	E	F	Across Sites ABCDEF	Dependent Variables
Initiation	IC								The signing of the contract and voting of the faculty and staff, the faculty and staff's attitudes toward the orientation, and the strength of administrative support.
	AC								
	S								
Implementation	IC								The quantity of work such as outputs, time, and assistance needed to complete the tasks. The quality of work such as tasks, outputs and attitudes of the participants.
	AC								
	S								
Potential for Continued Use	IC								The degree of official and unofficial administrative support. The amount of resources set aside for the system and the amount and type of incorporation being suggested.
	AC								
	S								
Timed Series Survey and Interrelationships With Individual Demographics									Summary of Results and Generalizations

Figure 1

A Diagram of the Data Analysis Schema

Key:

IC - Innovation Characteristics
AC - Advocate Consumer Interaction
S - Situational or Circumstantial Characteristics

Statement Concerning Results

As stated at the outset of this paper the purpose of the research was to provide a descriptive analysis of the process and events which occurred as the career guidance system was being tried in the six sites. Also, it was pointed out in the preface that this paper represents an attempt to share the basic purpose, methodology, and general factors which have resulted from an initial analysis of the data. No attempt is made in this paper to present specific findings according to the sites. Such information will be available at a later date (Kester and Howard, forthcoming).

Therefore, the next section presents a set of general statements which should be viewed as hypotheses. However, these hypotheses were developed not out of simply some theoretical framework and exercise of pondering, but out of an extensive effort to record and analyze an actual process of adoption. Taking into account the various limitations stated earlier in the research and design section, and the fact that these generalized factors have varying degrees of support, the practitioner, researcher and others can use these insights to reassess their understanding of the process of adoption. Before presenting the general critical factors, a description of the system studied and a brief overview of the six sites should help put the study into greater perspective.

Description of the System

This brief technical description of the system was extracted from brochures, pamphlets, newsletters and journal articles. Technically, the career guidance system is explained in terms of six modules of activities. Module one describes the process of organizing school personnel to accomplish prescribed developmental tasks. Module two consists of an indentification of student career guidance needs; determination of existing school resources; translation of

student needs into program goals and tentatively assigning priorities to program goals. The purpose of module three is to verify program goals. The purpose of module four is to derive behavioral objectives for student and adult actors. Module five is designed for school personnel to establish methods for achieving student objectives. Finally, module six explains a process for evaluating the program goals.

Description of the Sites

Six sites were involved in the development and trail use of the career guidance system. These sites were selected so as to represent urban, suburban and rural settings. Also the sites represented various geographical locations and a mixture of ethnic groups in the schools and communities. Two of the sites were primarily inner city and had a predominantly black population. Two of the sites were considered to be more suburban in nature. One of these suburban sites had a population of approximately 50% white and 50% black. The other suburban site had almost 100% white population. The final two sites were more rural in geographic location. One had a significant Mexican-American population along with a major population of whites and a small proportion of blacks. The other rural district had mainly a white population with some blacks.

In addition to the variations listed in the previous paragraph, the six sites also represented differing viewpoints in terms of school organization and functioning. One school was conducting a modular schedule. Another school was learning how to operate in a new open-space type facility. Some of the schools had various additions to a standard high school curriculum while others maintained a rather standard curriculum.

Although this brief discussion does not give much detailed information it should suggest that the six sites were reasonable examples of many of the

high schools that exist in the United States. This implies that the comments and factors uncovered in this study may have a broader application than if all the sites were quite similar.

Generalized Critical Factors

Introduction

Using the conceptual framework to assist in organizing the observations of this particular adoption effort led to the derivation of generalizations concerning factors which were critical to that process. These generalizations are consistent with the conceptual framework and the data gathered. However, it must be emphasized that the generalizations come from a comparatively small sample of cases. Therefore, the reader is cautioned to view the generalizations more as hypotheses to be further confirmed rather than strongly supported conclusions. Some generalizations are observable facts about the process of adopting career guidance systems. These facts are critical elements in the adoption process and will have an effect but whether the effect is facilitative or inhibiting seemingly depends on other factors. Other generalizations are stated in such a manner as to suggest facilitating factors. A third type of generalization suggests inhibiting factors. The converse of a facilitating factor will generally result in an inhibiting factor and vice-versa.

The factors are presented in four categories. The factors which affect the total adoption process will be presented first. The next three sets of factors will be those which affect the initiation, implementation, and potential for continued use (incorporation) phases, respectively.

Type of Generalization	Factors Influencing All Adoption Stages
	Characteristics of the Innovation.
Inhibitor	1. Career guidance systems will be perceived as a threat to the role responsibility of counselors in the high school.
Facilitator	2. Societal expectation, that schools should provide students with the ability to make life choices, will have a facilitating influence in the adoption of career guidance systems.
Fact	3. Monetary costs of a career guidance system will be of more overt concern to state or district administrators than personnel costs during the initiation phase. Personnel and time costs of a career guidance system are of more importance to the school faculty and staff than state or district personnel.
	Interaction Between Advocates and Consumers.
Fact	4. Career guidance systems will affect the school organization to the extent that they progress through three phases of adoption (i.e., initiation, implementation, incorporation).
Fact	5. Individuals can be said to have adopted a career guidance system to the extent that they have had the opportunity to progress through several stages of adoption (e.g., awareness, interest, mental evaluation, involvement, advocacy, and changed behaviors consistent with the expectations of the system).
Fact	6. Collectively and individually the characteristics of a career guidance system, the interaction between advocates and consumers, and circumstantial events or conditions will affect the manner and degree to which the system is accepted.
Fact	7. The interaction between advocates and consumers will be characterized by the use of informative, persuasive, and coercive actions and counter actions.
Fact	8. Participation by the consumers in the initiation, implementation, or incorporation of a career guidance system will not lead necessarily to successful adoption.
	Circumstantial and Situational Influences.
Inhibitor	9. The successful adoption of a career guidance system will be influenced by the different perceptions of personnel in various levels of the organizational structure. To the extent that these views are divergent this will be an inhibiting influence.

Type of Generalization	
Facilitator	10. Individual community members and community interest groups will influence the adoption of a career guidance system to the degree that they are aware of the purpose. The community's viewing this purpose as consistent with what they feel the school should be doing will have a facilitating affect on the adoption process
Inhibitor	11. General events which occur in connection with the process of schooling such as holiday breaks, semester tests, grading, bad weather, and teacher negotiations will be more inhibitive than facilitative to the adoption of a career guidance system.

Factors Influencing Initiation

Characteristics of the Innovation.

Fact	12. During the initiation of a career guidance system the state or district administrators will be less concerned than the school building administrators or the teachers about the operational procedures of the innovation.
Facilitator	13. The more consistent a career guidance system is with existing identifiable needs and priorities of the state or district administration, the greater will be the chance of a successful initiation.
Facilitator	14. Career guidance systems which systematically involve a combination of administrators, teachers, students, and/or other community persons will be viewed as more desirable than those which do not.

Interaction Between Advocates and Consumers.

Fact	15. The decision to try a career guidance system will be made more on the basis of some political, financial, or personal persuasion than on a complete understanding of the innovation.
Fact	16. Teachers will perceive that their involvement was less and that their participation was less significant in the decision to try a career guidance system.
Fact	17. The decision to try a career guidance system will involve persons in a manner similar to that of the existing formal organizational structure of the state, district, or local school organization.
Facilitator	18. During the initiation stage of a career guidance system coercive tactics will be more influential in arriving at a decision to try the innovation than informative or persuasive.
Fact	19. During the process of initiating a career guidance system the faculty and staff will exhibit a feeling that they have not had enough information on which to make a decision.

Type of Generalization

Facilitator 20. The closer (social distance) advocates are perceived to the norm groups(s) in the adopting organization the greater will be their potential for influencing the faculty and staff to try the career guidance system they are promoting.

Circumstantial and Situational Influences.

Facilitator 21. The greater the number of members of the organization who are familiar with the success of innovations in the past, the greater will be the facilitating effect on the initiation of a career guidance system.

Facilitator 22. With a career guidance system as it is introduced through the organizational structure, successful initiation will be associated to the degree that both advocates and consumers perceive overt support for the innovation by those in higher organizational positions.

Inhibitor 23. The more definitive and/or prescriptive the outcomes of a career guidance system, the greater will be the number of questions which will be raised about the system. Conversely, the less definitive and/or prescriptive the outcomes of a career guidance system are the greater the amount of misunderstanding there will be about the system.

Factors Influencing Implementation

Characteristics of the Innovation.

Inhibitor 24. The more a career guidance system purports to be based on a systems approach the more it will be viewed as overly mechanistic.

Fact 25. School personnel will react to a career guidance system in terms of attitudes and expectations. They will be concerned with the appropriateness of the content, the technical adequacy of the materials and procedures, the perception of general support and the personal relevance of the objectives. They will expect better guidance for students, a change in roles and relationships, and more efficient use of resources.

Facilitator 26. The implementation of a career guidance system will be facilitated to the extent the participants perceive that they have control and are able to transform the methods and procedures, and can prescribe their own solution to the problem as they see it.

Inhibitor 27. Innovations such as career guidance systems which purport to be based on a systems approach generally will be incongruent to the informal organizational patterns of schools.

Type of Generalization	
	Interaction Between Advocates and Consumers.
Fact	28. Persons who take an active role in implementing a career guidance system will do so because of one or a combination of the following reasons: (1) they see involvement in the system as a means to gain a better position or responsibility; (2) they see that participation with the system will increase their status in terms of such things as leadership or endearment; (3) they are afraid that if they do not become involved they might lose their job or be sanctioned by the administration or their peers; (4) they participate because a friend has asked them; (5) they perceive that the system is consistent with their professional or personal concerns; (6) they feel that it is their organizational duty to be involved with innovations in general which are supported by the administration, or (7) they just like the idea of being involved in things with other people.
Inhibitor	29. Perceived decreases in communication between the administration and faculty/staff about the career guidance system will increase the doubt of general support for the system.
Inhibitor	30. To the extent involvement in a career guidance system results in a conflict of role responsibilities, the faculty or staff member will choose those role responsibilities established by the school organization prior to and running concurrent with the introduction and implementation of the system.
Facilitator	31. To the extent that faculty or staff members perceive there is overt administrative support for the career guidance system those individuals will choose the role responsibility of the system over their role responsibilitites prior to and concurrent with the adoption process.
Fact	32. Advocates who view themselves as peers of the consumers will use informative and persuasive tactics more than coercive tactics to gain involvement in a career guidance system.
Facilitator	33. Implementations of career guidance systems established under the dictates of a contract will result in the completion of specified tasks to a greater degree than those not established under such conditions.
Facilitator	34. During implementation of a career guidance system advocates will have less resistance from consumers to the extent that they are perceived as sharing some of the general responsibilities which fall on all members of the faculty and staff.
Inhibitor	35. Mass community tactics will result in more misperceptions about the innovation than will person-to-person tactics during the implementation process.

Type of Generalization

Facilitator 36. Persuasive or coercive tactics will be more effective than other tactics in gaining and maintaining involvement, and accomplishing the prescribed tasks of a career guidance system.

37. As the change suggested by a career guidance system becomes more eminent in the eyes of the consumers the following phenomena can be increasingly observed:

Fact
1. consumers will begin to alter their behavior (e.g., teaching methods) to conform or prepare themselves to what they perceive the system outcomes will be.

2. advocates will tend to attribute this conforming or planning to the existance and success of the system.

3. non-advocates (resistors) will tend to disavow any relationship between this conforming or planning and the system.

Circumstantial and Situational Influences.

Facilitator 38. To the extent that generally accepted bureaucratic procedures are adhered to and protocol is respected the perception of the legitimacy of a career guidance system will increase.

Inhibitor 39. To the extent that expected outcomes of a career guidance system are not achieved concerns will be expressed about the viability and effectiveness of the system.

Fact 40. Faculty and staff personnel who are members of ethnic minority groups will involve themselves, be more favorable, and have greater expectations for career guidance systems than ethnically white faculty and staff members.

Factors Influencing Potential for Continued Use

Characteristics of the Innovation.

Facilitator 41. Incorporation will be more likely if the career guidance system can be partially used or adapted to the school.

Interaction Between Advocates and Consumers.

Facilitator 42. Incorporation of a career guidance system will occur to the extent that the school personnel perceive there is official (formal and overt) and unofficial (informal and tacit or overt) support for continuance.

Type of Generalization	
	Circumstantial and Situational Influences.
Facilitator	43. Incorporation will occur more often in situations in which the implementation has resulted in some worthwhile outcomes. (Outcomes perceived as worthwhile by the school personnel and the primary advocate during implementation play a central role during incorporation).

REFERENCES

Campbell, R. E. Vocational Guidance in Secondary Education: Results of a National Survey. Columbus, Ohio: The Ohio State University, The Center for Vocational Education, 1968.

R. E. Campbell, Suzuki, Warren N. and Gabria, Michael J. Jr. "A Procedural Model for Upgrading Career Guidance," American Vocational Journal, January 1972.

Giacquinta, Joseph B. "The Process of Organizational Change in Schools," in F. N. Kerlinger (ed.) Review of Research in Education, Itasca, Illinois: F. E. Peacock Publishers, Inc., 1973.

Hull, William L., Kester, Ralph J., and Martin, William B. A Conceptual Framework for the Diffusion of Innovations in Vocational and Technical Education. Columbus, Ohio: The Center for Vocational Education, The Ohio State University, 1973.

Kester, Ralph J. and Howard, John Jr. The Adoption of Systems Innovations in Educational Organizations: A Case Study of Operation Guidance. Columbus, Ohio: The Center for Vocational Education, The Ohio State University, (forthcoming).

Kester, Ralph J. and Hull, William L. The Identification of Empirical Dimensions of the Diffusion Process. Columbus, Ohio: The Center for Vocational Education, The Ohio State University, 1973.

Leithwood, K. A., Russell, H. H., Robinson, F. G., and Clipsham, J. S. "A Revised Model of Planned School Change," The Ontario Institute for Studies in Education. A paper presented at the annual meeting of the American Educational Research Association in Chicago, Illinois on April 15-19, 1974.